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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,729	12/14/2001	Xiaoru Wang	83067SMR	5473

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EXAMINER	
SHOSHO, CALLIE E	
ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,729	WANG ET AL.	
	Examiner	Art Unit	
	Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-27 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) ~~Paper No(s).~~ 12/14/01 & 2/19/03
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1, Application No. 09/510,870 and Application No. 10/020,694 has been stricken from the IDS since these applications are not available to the public. However, these applications have been considered and the "Search Notes" of the instant file wrapper has been annotated to this effect.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11 and 23-24, which each ultimately depend on claim 1, each recites the limitation "the composite polymer-dye particles". There is insufficient antecedent basis for this limitation in the claims given that there is no recitation of "composite polymer-dye particles" in claim 1. It is suggested that either "composite" is deleted from the above phrase in each of the claims or "composite" is inserted before "polymer" in line 2 of claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 4, 9-10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 04185672.

Pending translation, it is noted that JP 04185672 discloses ink jet ink comprising water, humectant, stabilizer such as polyvinyl alcohol or starch, and colored resin which comprises 0.1-20% water-insoluble dye and 80-99.9% resin wherein the colored resin has particle size of 0.05-5 μm.

In light of the above, it is clear that JP 04185672 anticipates the present claims.

6. Claims 1-6, 9-16, and 19-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsumi et al. (U.S. 6,031,019) taken in view of the evidence in Howald (U.S. 6,153,667) and Helbrecht et al. (U.S. 5,302,195).

Tsutsumi et al. disclose ink jet ink comprising water, humectant, hydrophobic stabilizer, and polymer encapsulated dye wherein the polymer has molecular weight of 3,000-80,000 and the polymer encapsulated dye has particle size of 0.1-500 nm. The dye is water –insoluble dye (col.3, line 65-col.4, line 7, col.4, line 21, col.8, lines 65-67, col.11, lines 38-44 and 56-67, and col.13, line 5). From Preparation example 1 and Preparation Example 2, it is calculated that the ratio of dye to polymer in the polymer encapsulated dye is 1/1 and 0.46/1, respectively.

The dye utilized includes that known under the tradename Oil Black 860 which is also known as Solvent Black 3, as evidenced by Howald (col.5, lines 20-21), which is an azo dye, as evidenced by Helbrecht et al. (col.4, lines 44-45).

In light of the above, it is clear that Tsutsumi et al. anticipate the present claims.

7. Claims 1-2, 4-6, 9-10, and 13-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimomura et al. (U.S. 5,837,754).

Shimomura et al. disclose ink jet ink comprising water, humectant, polymeric stabilizer, and colored polyester which comprises 2-20% water-insoluble dye and 80-98% polyester which can be crosslinked. The colored polyester has particle size of 0.1-1 μm (col.4, lines 45-47, col.9, lines 32-48, 56-59, and 66-67, col.10, lines 12-37, and col.12, lines 41-44).

The dyes include Solvent Black 3 which is well known, as evidenced Helbrecht et al. (col.4, lines 44-45), as an azo dye.

In light of the above, it is clear that Shimomura et al. anticipate the present claims.

8. Claims 1-2, 4, and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1006161.

EP 1006161 discloses ink jet ink comprising water, alkali hydroxide, i.e. co-stabilizer, humectant, and water-insoluble dye encapsulated polymer which has particle size of 5-500 nm (paragraphs 80, 84, 87, 91, 95, and 103).

In light of the above, it is clear that EP 1006161 anticipates the present claims.

9. Claims 1-2, 4, 9-12, 14-16, 19, and 22-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishizuka et al. (U.S. 2001/0023267).

Ishizuka et al. disclose inkjet ink comprising water, humectant, stabilizer, and colored resin that has particle size of 1-500 nm and comprises water-insoluble dye and resin which has molecular weight of 1,000-100,000. There is also disclosed an ink jet printing process wherein the above ink is loaded into ink jet printer and the printed onto substrate comprising ink receiving layer to produce image (paragraphs 43, 50-51, 110-111, 244, 247, 250, 265, 335, 337, 339, 349, 371, and 407).

In light of the above, it is clear that Ishizuka et al. anticipate the present claims.

10. **NOTE:** With respect to claims 14-25 and 27, it is noted that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself". See MPEP 2113.

Thus, although none of the references, i.e. Tsutsumi et al., Shimomura et al., or Ishizuka et al. cited in the rejections above disclose the specific presently claimed process for making the polymer-dye particles, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious

difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for making the polymer-dye particles and given that the cited references meet the requirements of the claimed polymer-dye particles, the cited references clearly meet the requirements of present claims 14-16 and 19-25 (Tsutsumi et al.), claims 14-23 (Shimomura et al.), and 14-16, 19, 22-25, and 27 (Ishizuka et al.).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (U.S. 6,031,019) or Shimomura et al. (U.S. 5,837,754) either of which in view of Moore et al. (U.S. 4,698,651).

The disclosures with respect to Tsutsumi et al. and Shimomura et al. in paragraphs 6 and 7, respectively, are incorporated here by reference.

The difference between Tsutsumi et al. or Shimomura et al. and the present claimed invention is the requirement in the claims of specific type of dye.

Moore et al. disclose the use of arylazoisothiazole dye in order to improve light stability and hue (col.1, line 65-col.2, line 15).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to sue such dye in the ink of either Tsutsumi et al. or Shimomura et al. in order to improve light stability and hue, and thereby arrive at the claimed invention.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (U.S. 6,031,019) or Shimomura et al. (U.S. 5,837,754) either of which in view of Evans et al. (U.S. 6,001,161).

The disclosures with respect to Tsutsumi et al. and Shimomura et al. in paragraphs 6 and 7, respectively, are incorporated here by reference.

The difference between Tsutsumi et al. or Shimomura et al. and the present claimed invention is the requirement in the claims of specific type of dye.

Evans et al., which is drawn to ink jet ink, disclose the use of dye which is metal complex of 8-heterocyclcylazo-5-hydroxyquinoline in order to produce ink with outstanding light stability and bright magenta hue (col.2, lines 17-24).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to sue such dye in the ink of Tsutsumi et al. or Shimomura et al. in order to produce ink with outstanding light stability and bright magenta hue, and thereby arrive at the claimed invention.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hair et al. (U.S. 4,680,332) disclose ink jet ink comprising polymer containing oil-soluble dye and non-ionic stabilizer attached thereto.

Takada et al. (U.S. 6,454,403) disclose ink jet ink comprising colored resin and stabilizer.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Callie E. Shosho
Primary Examiner
Art Unit 1714

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8/14/03